

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002853**Date Inspected:** 04-Jun-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Wei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower and OBG**Summary of Items Observed:**

The Quality Assurance (QA) Inspector Gregory Bertlesman arrived on site at the Zhenhua Port Machinery Company facility on Changxing island, China to periodically monitor welding and Quality Control functions. While on site the Quality Assurance Inspector observed and/or discovered the following.

77M Tower Partial Mock-ups
WT-125

Diaphragm Plate to Web Plate

The Quality Assurance Inspector performed an inspection of the fit-up, measuring the depth of bevel and the bevel angle. The Quality Assurance Inspector measured the bevel angle to be approximately 45 degrees and the depth of bevel to be approximately 29 millimeters. Upon completion, the Quality Assurance Inspector witnessed ZPMC perform magnetic particle testing to the tack welds of the partial mock-up.

Longitudinal Stiffener to Skin Plate WT-101

The Quality Assurance Inspector performed an inspection of the fit-up, measuring the depth of bevel, the bevel angle, and the location of the restriction plates. The Quality Assurance measured one of the restriction plates to be approximately 563 millimeters from the longitudinal stiffener when it was required to be 555 millimeters from the stiffener. ABF representative Mike Williams was informed of the discrepancy. Mr. Williams stated he never thought to measure that distance and he would request the plate be moved as it is detailed. The Quality Assurance Inspector measured the bevel angle to be approximately 45 degrees and the depth of bevel to be approximately 30 millimeters. Below is a digital photograph illustrating the measurement of the depth of bevel. In addition, the Quality Assurance Inspector observed the longitudinal stiffener a slightly skewed angle. Mr. Williams was informed and stated it should not be an issue. Below is a digital photograph illustrating the skewed angle.

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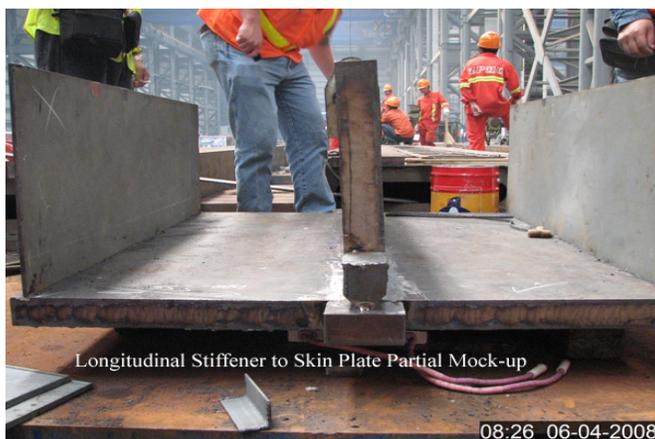
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Deck Panel Production Monitoring Test (PMT)

The Quality Assurance Inspector was informed by ABF representative Warren Buehler that he performed magnetic particle testing to the tack welds of the PMT for DP-609-001. Mr. Buehler informed the Quality Assurance Inspector that five of the twelve tacks appeared to contain cracks.

114M Tower Mock-up Assembly

The Quality Assurance Inspector observed ZPMC utilizing a 5 ton counterweight in an effort to force the upper assembly back in contact with the lower assembly. The counterweight was attached to an overhead crane and then the crane raised and lowered the counterweight onto the upper assembly. It appeared the exterior bolted connection plates were interfering with the reassembly. Below is a digital photograph illustrating the process.



Summary of Conversations:

As stated in the contents of the above report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh (916) 227-5719, who represents the Office of Structural Materials for your project.

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Inspected By: Bertlesman, Greg

Quality Assurance Inspector

Reviewed By: Cuellar, Robert

QA Reviewer